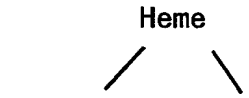
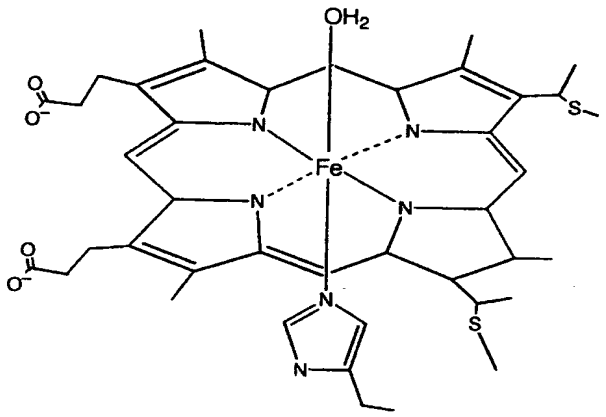
CLAIMS

1. A heme peptide represented by the following formula I:



(I)

where A1 is a hydrogen atom or a peptide chain consisting of 1 to 20 amino acid residues;
A2 is a hydroxyl group or a peptide chain consisting of 1 to 50 amino acid residues;
the heme is a heme nucleus represented by the following formula:



(II)

X1 and X2 each independently represent any amino acid residue; and
X3 is His, Lys or Arg.

2. The heme peptide according to claim 1, wherein X1 and X2 in formula I each independently represent an amino acid residue selected from the group consisting of Ala, Gln, Lys, Arg and Val.

3. The heme peptide according to claim 1, wherein X1 is Ala; X2 is Gln or Ala; and X3 is His in formula I.

4. The heme peptide according to claim 1, wherein

A1 is a hydrogen atom or a peptide chain having an amino acid sequence of Val Gln Lys;

A2 is a peptide chain having an amino acid sequence of Thr Val Glu Lys or Thr Val

Glu Lys Gly Gly Lys His Lys Thr Gly Pro Asn Leu;

X1 is Ala; X2 is Gln; and X3 is His in formula I.

5. The heme peptide according to claim 1, wherein

A1 is a peptide chain having an amino acid sequence of Phe Ser Ala Asn;

A2 is a peptide chain having an amino acid sequence of Ala Gly Gly Asn Asn Ala;

X1 is Ala; X2 is Ala; and X3 is His in formula I.

6. A method of producing the heme peptide according to claim 1, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

7. The method according to claim 6, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

8. A method of producing the heme peptide according to claim 2, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

9. The method according to claim 8, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

10. A method of producing the heme peptide according to claim 3, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

11. The method according to claim 10, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

12. A method of producing the heme peptide according to claim 4, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

13. The method according to claim 12, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

14. A method of producing the heme peptide according to claim 5, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

15. The method according to claim 14, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

16. An NO scavenger comprising the heme peptide according to claim 1.

17. An NO scavenger comprising the heme peptide according to claim 2.

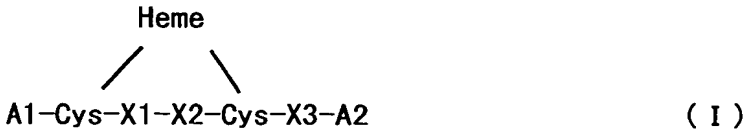
18. An NO scavenger comprising the heme peptide according to claim 3.

19. An NO scavenger comprising the heme peptide according to claim 4.

20. An NO scavenger comprising the heme peptide according to claim 5.

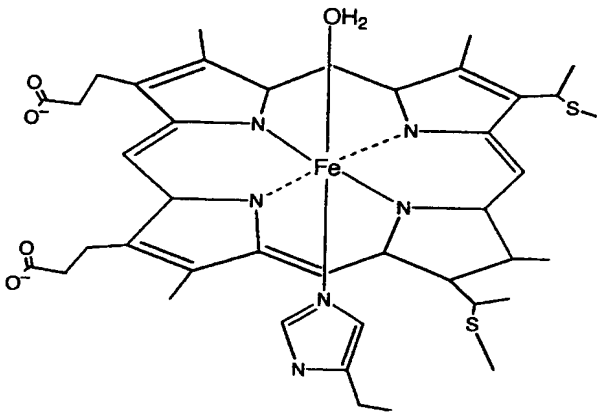
CLAIMS

1. A heme peptide represented by the following formula I:



(I)

where A1 is a hydrogen atom or a peptide chain consisting of 1 to 20 amino acid residues;
A2 is a hydroxyl group or a peptide chain consisting of 1 to 50 amino acid residues;
the heme is a heme nucleus represented by the following formula:



(II)

X1 and X2 each independently represent any amino acid residue; and
X3 is His, Lys or Arg.

2. The heme peptide according to claim 1, wherein X1 and X2 in formula I each independently represent an amino acid residue selected from the group consisting of Ala, Gln, Lys, Arg and Val.

3. The heme peptide according to claim 1, wherein X1 is Ala; X2 is Gln or Ala; and X3 is His in formula I.

4. (amended) The heme peptide according to claim 1, wherein

A1 is a hydrogen atom or a peptide chain having an amino acid sequence of Val-Gln-Lys-;

A2 is a peptide chain having an amino acid sequence of -Thr-Val-Glu-Lys or -Thr-Val-Glu-Lys-Gly-Gly-Lys-His-Lys-Thr-Gly-Pro-Asn-Leu;

X1 is Ala; X2 is Gln; and X3 is His in formula I.

5. (amended) The heme peptide according to claim 1, wherein

A1 is a peptide chain having an amino acid sequence of Phe-Ser-Ala-Asn-;

A2 is a peptide chain having an amino acid sequence of -Ala-Gly-Gly-Asn-Asn-Ala;

X1 is Ala; X2 is Ala; and X3 is His in formula I.

6. (amended) The heme peptide according to claim 1, wherein except that

A1 is a hydrogen atom;

A2 is a peptide chain having an amino acid sequence of -Thr-Val-Glu;

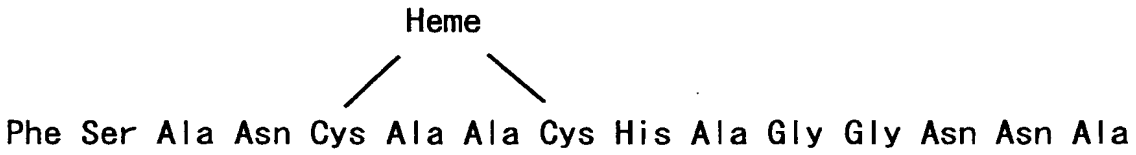
X1 is Ala; X2 is Glu; and X3 is His, and

A1 is a peptide chain having an amino acid sequence of Val-Glu-Lys-;

A2 is a peptide chain having an amino acid sequence of -Thr-Val-Glu;

X1 is Ala; X2 is Glu; and X3 is His in formula I.

7. (amended) The heme peptide according to claim 1, wherein the heme peptide is selected from the group consisting of heme peptides represented by the following formulas:



8. (amended) A method of producing the heme peptide according to claim 1, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

9. (amended) The method according to claim 8, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

10. (amended) A method of producing the heme peptide according to claim 2, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

11. (amended) The method according to claim 10, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

12. (amended) A method of producing the heme peptide according to claim 3, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

13. (amended) The method according to claim 12, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

14. (amended) A method of producing the heme peptide according to claim 4, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

15. (amended) The method according to claim 14, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

16. (amended) A method of producing the heme peptide according to claim 5, comprising digesting cytochrome *c* with a restriction enzyme and purifying the resultant digest by gel filtration chromatography.

17. (amended) The method according to claim 16, wherein the restriction enzyme is selected from the group consisting of thermolysin, trypsin, chymotrypsin, *Achromobacter* protease I and *Staphylococcus aureus* V8 protease.

18. (amended) An NO scavenger comprising the heme peptide according to claim 1.

19. (amended) An NO scavenger comprising the heme peptide according to claim 2.

20. (amended) An NO scavenger comprising the heme peptide according to claim 3.

21. (added) An NO scavenger comprising the heme peptide according to claim 4.

22. (added) An NO scavenger comprising the heme peptide according to claim 5.